

## PCT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

Date of mailing (day/month/year) 29 June 2001 (29.06.01)	
International application No. PCT/JP00/06750	Applicant's or agent's file reference TP00040
International filing date (day/month/year) 29 September 2000 (29.09.00)	Priority date (day/month/year) 12 October 1999 (12.10.99)
Applicant MATSUOKA, Hideo et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 27 April 2001 (27.04.01)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer  Antonia Muller  Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

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NOTIFICATION OF RECEIPT OF  
RECORD COPY

(PCT Rule 24.2(a))

From the INTERNATIONAL BUREAU

To:

IWAMI, Tomonori  
Intellectual Property Department  
Toray Industries, Inc.  
8-1, Mihama 1-chome  
Urayasu-shi, Chiba 279-8555  
JAPON

Date of mailing (day/month/year) 20 October 2000 (20.10.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference TP00040	International application No. PCT/JP00/06750

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

TORAY INDUSTRIES, INC. (for all designated States except US)  
MATSUOKA, Hideo et al (for US)

International filing date : 29 September 2000 (29.09.00)  
Priority date(s) claimed : 12 October 1999 (12.10.99)  
17 December 1999 (17.12.99)  
17 February 2000 (17.02.00)

Date of receipt of the record copy  
by the International Bureau : 13 October 2000 (13.10.00)

List of designated Offices :

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
National : CN, KR, US




## ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase
- ☒ confirmation of precautionary designations
- ☒ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. (41-22) 740.14.35</p>	<p>Authorized officer:</p> <p>Susumu Kubo </p> <p>Telephone No. (41-22) 338.83.38</p>
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## INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations, as prescribed by the applicable national laws.

The time limit for performing these procedural acts is **20 MONTHS** from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election, **30 MONTHS** from the priority date, provided that the election is made before the expiration of 19 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1996 and 6 September 1997, respectively, and may, therefore, be elected in a demand or a later election filed on or after 7 September 1996 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

## CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

## REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.



## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

IWAMI, Tomonori  
Intellectual Property Department  
Toray Industries, Inc.  
8-1, Mihama 1-chome  
Urayasu-shi, Chiba 279-8555  
JAPON

Date of mailing (day/month/year) 11 February 2001 (11.02.01)	
Applicant's or agent's file reference TP00040	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/JP00/06750	International filing date (day/month/year) 29 September 2000 (29.09.00)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 12 October 1999 (12.10.99)
Applicant TORAY INDUSTRIES, INC. et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
12 Octo 1999 (12.10.99)	11/290345	JP	17 Nove 2000 (17.11.00)
17 Dece 1999 (17.12.99)	11/358849	JP	17 Nove 2000 (17.11.00)
17 Febr 2000 (17.02.00)	2000/39192	JP	17 Nove 2000 (17.11.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Magda BOUACHA

Telephone No. (41-22) 338.83.38

## 国際調査報告

(法8条、法施行規則第40、41条)  
[PCT18条、PCT規則43、44]

出願人又は代理人 の書類記号 TP00040	今後の手続きについては、国際調査報告の送付通知様式(PCT/ISA/220)及び下記5を参照すること。	
国際出願番号 PCT/JP00/06750	国際出願日 (日.月.年) 29.09.00	優先日 (日.月.年) 12.10.99
出願人(氏名又は名称) 東レ株式会社		

国際調査機関が作成したこの国際調査報告を法施行規則第41条(PCT18条)の規定に従い出願人に送付する。  
この写しは国際事務局にも送付される。

この国際調査報告は、全部で 3 ページである。

☐ この調査報告に引用された先行技術文献の写しも添付されている。

## 1. 国際調査報告の基礎

a. 言語は、下記に示す場合を除くほか、この国際出願がされたものに基づき国際調査を行った。

☐ この国際調査機関に提出された国際出願の翻訳文に基づき国際調査を行った。

b. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際調査を行った。

☐ この国際出願に含まれる書面による配列表

☐ この国際出願と共に提出されたフレキシブルディスクによる配列表

☐ 出願後に、この国際調査機関に提出された書面による配列表

☐ 出願後に、この国際調査機関に提出されたフレキシブルディスクによる配列表

☐ 出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった。

☐ 書面による配列表に記載した配列とフレキシブルディスクによる配列表に記載した配列が同一である旨の陳述書の提出があった。

2. ☐ 請求の範囲の一部の調査ができない(第I欄参照)。

3. ☐ 発明の単一性が欠如している(第II欄参照)。

4. 発明の名称は ☒ 出願人が提出したものを承認する。

☐ 次に示すように国際調査機関が作成した。

5. 要約は ☒ 出願人が提出したものを承認する。

☐ 第III欄に示されているように、法施行規則第47条(PCT規則38.2(b))の規定により国際調査機関が作成した。出願人は、この国際調査報告の発送の日から1カ月以内にこの国際調査機関に意見を提出することができる。

6. 要約書とともに公表される図は、

第        図とする。 ☐ 出願人が示したとおりである。

☒ なし

☐ 出願人は図を示さなかった。

☐ 本図は発明の特徴を一層よく表している。

## A. 発明の属する分野の分類 (国際特許分類 (IPC))

Int. Cl.<sup>7</sup> C08L81/02, C08L77/00, B32B27/34, B32B27/00, C08J5/00

## B. 調査を行った分野

## 調査を行った最小限資料 (国際特許分類 (IPC))

Int. Cl.<sup>7</sup> C08L81/00-81/02, C08L77/00-77/12, B32B27/34, B32B27/00, C08J5/00

最小限資料以外の資料で調査を行った分野に含まれるもの

国際調査で使用した電子データベース (データベースの名称、調査に使用した用語)

## C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
X	JP, 10-138372, A (東レ株式会社) 26. 5月. 1998 (26. 05. 98), 特許請求の範囲, 【0072】, 【0079】, 実施例&EP, 900650, A1&WO, 9821030, A1	1-6, 8-16
X	JP, 5-124090, A (東レ株式会社) 21. 5月. 1993 (21. 05. 93), 特許請求の範囲, 【0046】, 【0047】, 【0055】, 実施例, (ファミリーなし)	1, 4, 6, 8, 9
X	JP, 5-185425, A (第一精工株式会社) 27. 7月. 1	1-7

☒ C欄の続きにも文献が列挙されている。☐ パテントファミリーに関する別紙を参照。

## \* 引用文献のカテゴリー

「A」特に関連のある文献ではなく、一般的技術水準を示すもの

「E」国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの

「L」優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す)

「O」口頭による開示、使用、展示等に言及する文献

「P」国際出願日前で、かつ優先権の主張の基礎となる出願

の日の後に公表された文献

「T」国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの

「X」特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの

「Y」特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの

「&amp;」同一パテントファミリー文献

国際調査を完了した日

12. 12. 00

国際調査報告の発送日

26.12.00

国際調査機関の名称及びあて先

日本国特許庁 (ISA/JP)

郵便番号100-8915

東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

藤本 保

4 J

9842

電話番号 03-3581-1101 内線 3456

C (続き) . 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
	993 (27.07.93), 特許請求の範囲, 第2欄第12-18行, 第4欄第11-13行, 実施例, (ファミリーなし)	
X	JP, 2-222452, A (大日本インキ化学工業株式会社) 5.9月.1990 (05.09.90), 特許請求の範囲, 第4頁左上欄から左下欄, 実施例, (ファミリーなし)	1-7
X	US, 5436300, A (Kureha Kagaku Kogyo Kabushiki Kaisha) 25.7月.1995 (25.07.95), 第2欄第25-46, 第6欄第37行-第9欄第6行, 第9欄第19行-第10欄第42行&JP, 5-51532, A, 特許請求の範囲, 【0008】, 【0009】, 実施例&EP, 495457, A3	1-3, 5-7
X	JP, 3-215556, A (宇部興産株式会社, トヨタ自動車株式会社, 株式会社豊田中央研究所) 20.9月.1991 (20.09.91), 特許請求の範囲, 第3頁右下欄, 第4頁右下欄, 実施例, (ファミリーなし)	1-3, 6, 7

47  
Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TP00040	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP00/06750	International filing date (day/month/year) 29 September 2000 (29.09.00)	Priority date (day/month/year) 12 October 1999 (12.10.99)
International Patent Classification (IPC) or national classification and IPC C08L 81/02, 77/00, B32B 27/34, 27/00, C08J 5/00		
Applicant TORAY INDUSTRIES, INC.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>2</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 27 April 2001 (27.04.01)	Date of completion of this report 13 September 2001 (13.09.2001)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP00/06750

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
pages 1-32, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages 4,5,11-16, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages 2,3,6-10, filed with the letter of 31 August 2001 (31.08.2001)
- ☒ the drawings:  
pages 1-7, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☒ the claims, Nos. 1
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP00/06750

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	8-16	YES
	Claims	2-7	NO
Inventive step (IS)	Claims	8-16	YES
	Claims	2-7	NO
Industrial applicability (IA)	Claims	2-16	YES
	Claims		NO

### 2. Citations and explanations

The subject matters of claims 2-6 do not appear to be novel, since they are described in document 3 [JP, 5-185425, A (Daiichi Seiko K.K.), 27 July, 1993 (27.07.93), the claims, column 2, lines 12-18, column 4, lines 11-13, examples] cited in the ISR.

The subject matter of claim 7 does not appear to involve an inventive step. A person skilled in the art could have easily obtained a molded article, for example, by injection-molding the resin composition described in document 3.

The subject matters of claims 2, 3, 6 and 7 do not appear to be novel, since they are described in document 6 [JP, 3-215556, A (Ube Industries, Ltd., Toyota Motor Corp., Toyota Central Research and Development Laboratories, Inc.), 20 September, 1991 (20.09.91), the claims, page 3, lower right column, page 4, lower right column, examples] cited in the ISR.

PCT

国際予備審査報告

(法第12条、法施行規則第56条)  
(PCT36条及びPCT規則70)

REC'D 28 SEP 2001

WIPO

PCT

出願人又は代理人 の書類記号 TP00040	今後の手続きについては、国際予備審査報告の送付通知(様式PCT/ IPEA/416)を参照すること。	
国際出願番号 PCT/JP00/06750	国際出願日 (日.月.年) 29.09.00	優先日 (日.月.年) 12.10.99
国際特許分類(IPC) Int. Cl. C08L81/02, C08L77/00, B32B27/34, B32B27/ 00, C08J5/00		
出願人(氏名又は名称) 東レ株式会社		

- 国際予備審査機関が作成したこの国際予備審査報告を法施行規則第57条(PCT36条)の規定に従い送付する。
- この国際予備審査報告は、この表紙を含めて全部で 3 ページからなる。  
☒ この国際予備審査報告には、附属書類、つまり補正されて、この報告の基礎とされた及び/又はこの国際予備審査機関に対してした訂正を含む明細書、請求の範囲及び/又は図面も添付されている。  
(PCT規則70.16及びPCT実施細則第607号参照)  
この附属書類は、全部で 2 ページである。

- この国際予備審査報告は、次の内容を含む。
  - ☒ 国際予備審査報告の基礎
  - ☐ 優先権
  - ☐ 新規性、進歩性又は産業上の利用可能性についての国際予備審査報告の不作成
  - ☐ 発明の単一性の欠如
  - ☒ PCT35条(2)に規定する新規性、進歩性又は産業上の利用可能性についての見解、それを裏付けるための文献及び説明
  - ☐ ある種の引用文献
  - ☐ 国際出願の不備
  - ☐ 国際出願に対する意見

国際予備審査の請求書を受理した日 27.04.01	国際予備審査報告を作成した日 13.09.01	
名称及びあて先 日本国特許庁(IPEA/JP) 郵便番号100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官(権限のある職員) 藤本 保	4 J 9842
電話番号 03-3581-1101 内線 3455		

## I. 国際予備審査報告の基礎

1. この国際予備審査報告は下記の出願書類に基づいて作成された。(法第6条(PCT14条)の規定に基づく命令に  
応答するために提出された差し替え用紙は、この報告書において「出願時」とし、本報告書には添付しない。  
PCT規則70.16, 70.17)

☐ 出願時の国際出願書類

- |                                     |            |   |             |        |                         |
|-------------------------------------|------------|---|-------------|--------|-------------------------|
| <input checked="" type="checkbox"/> | 明細書        | 第 | 1-32        | ページ、   | 出願時に提出されたもの             |
|                                     | 明細書        | 第 |             | ページ、   | 国際予備審査の請求書と共に提出されたもの    |
|                                     | 明細書        | 第 |             | ページ、   | 付の書簡と共に提出されたもの          |
| <input checked="" type="checkbox"/> | 請求の範囲      | 第 | 4, 5, 11-16 | 項、     | 出願時に提出されたもの             |
|                                     | 請求の範囲      | 第 |             | 項、     | PCT19条の規定に基づき補正されたもの    |
|                                     | 請求の範囲      | 第 |             | 項、     | 国際予備審査の請求書と共に提出されたもの    |
|                                     | 請求の範囲      | 第 | 2, 3, 6-10  | 項、     | 31.08.01 付の書簡と共に提出されたもの |
| <input checked="" type="checkbox"/> | 図面         | 第 | 1-7         | ページ/図、 | 出願時に提出されたもの             |
|                                     | 図面         | 第 |             | ページ/図、 | 国際予備審査の請求書と共に提出されたもの    |
|                                     | 図面         | 第 |             | ページ/図、 | 付の書簡と共に提出されたもの          |
| <input type="checkbox"/>            | 明細書の配列表の部分 | 第 |             | ページ、   | 出願時に提出されたもの             |
|                                     | 明細書の配列表の部分 | 第 |             | ページ、   | 国際予備審査の請求書と共に提出されたもの    |
|                                     | 明細書の配列表の部分 | 第 |             | ページ、   | 付の書簡と共に提出されたもの          |

2. 上記の出願書類の言語は、下記に示す場合を除くほか、この国際出願の言語である。

上記の書類は、下記の言語である \_\_\_\_\_ 語である。

- ☐ 国際調査のために提出されたPCT規則23.1(b)にいう翻訳文の言語  
☐ PCT規則48.3(b)にいう国際公開の言語  
☐ 国際予備審査のために提出されたPCT規則55.2または55.3にいう翻訳文の言語

3. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際予備審査報告を行った。

- ☐ この国際出願に含まれる書面による配列表  
☐ この国際出願と共に提出されたフレキシブルディスクによる配列表  
☐ 出願後に、この国際予備審査(または調査)機関に提出された書面による配列表  
☐ 出願後に、この国際予備審査(または調査)機関に提出されたフレキシブルディスクによる配列表  
☐ 出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった  
☐ 書面による配列表に記載した配列とフレキシブルディスクによる配列表に記録した配列が同一である旨の陳述書の提出があった。

4. 補正により、下記の書類が削除された。

- ☐ 明細書 第 \_\_\_\_\_ ページ  
☒ 請求の範囲 第 1 項  
☐ 図面 図面の第 \_\_\_\_\_ ページ/図

5. ☐ この国際予備審査報告は、補充欄に示したように、補正が出願時における開示の範囲を越えてされたものと認められるので、その補正がされなかったものとして作成した。(PCT規則70.2(c) この補正を含む差し替え用紙は上記1.における判断の際に考慮しなければならず、本報告に添付する。)

## V. 新規性、進歩性又は産業上の利用可能性についての法第12条(PCT35条(2))に定める見解、それを裏付ける文献及び説明

## 1. 見解

新規性(N)	請求の範囲	8-16	有
	請求の範囲	2-7	無
進歩性(IS)	請求の範囲	8-16	有
	請求の範囲	2-7	無
産業上の利用可能性(IA)	請求の範囲	2-16	有
	請求の範囲		無

## 2. 文献及び説明(PCT規則70.7)

請求の範囲2-6は、国際調査報告で引用された文献3(JP, 5-18542 5, A(第一精工株式会社)27.7月.1993(27.07.93)), 特許請求の範囲, 第2欄第12-18行, 第4欄第11-13行, 実施例)に記載されているので新規性を有しない。

請求の範囲7は、文献3により進歩性を有しない。文献3記載の樹脂組成物を射出成形すること等により成型品を得ることは当業者にとって容易である。

請求の範囲2, 3, 6, 7は、国際調査報告で引用された文献6(JP, 3-215556, A(宇部興産株式会社, トヨタ自動車株式会社, 株式会社豊田中央研究所)20.9月.1991(20.09.91)), 特許請求の範囲, 第3頁右下欄, 第4頁右下欄, 実施例)に記載されているので新規性を有しない。

## 請 求 の 範 囲

1. (削除)

2. (補正後) 実質的に (a) ポリアミド樹脂 55～80 容量% 及び (b) ポリフェニレンスルフィド樹脂 45～20 容量% からなる樹脂組成物で構成され、かつ、電子顕微鏡で観察される樹脂相分離構造において (b) ポリフェニレンスルフィド樹脂がマトリクス相 (連続相)、(a) ポリアミド樹脂が分散相となる相構造を形成することを特徴とする熱可塑性樹脂構造体。

3. (補正後) (a) ポリアミド樹脂と (b) ポリフェニレンスルフィド樹脂の混合比率が、各々 60～75 容量% および 40～25 容量% であることを特徴とする請求の範囲第 2 項記載の熱可塑性樹脂構造体。

4. (a) ポリアミド樹脂 15～85 容量% 及び (b) ポリフェニレンスルフィド樹脂 85～15 容量% からなる樹脂組成物で構成され、かつ、電子顕微鏡で観察される樹脂相分離構造において (b) ポリフェニレンスルフィド樹脂からなる相も (a) ポリアミド樹脂からなる相もともに実質的な連続相である相構造を形成することを特徴とする熱可塑性樹脂構造体。

5. (a) ポリアミド樹脂 55～95 容量% 及び (b) ポリフェニレンスルフィド樹脂 45～5 容量% からなる樹脂組成物で構成され、かつ、電子顕微鏡で観察される樹脂相分離構造において (a) ポリアミド樹脂からなる連続相と (b) ポリフェニレンスルフィド樹脂からなる帯状分散相とからなる相構造を形成することを特徴とする熱可塑性樹脂構造体。

6. (補正後) (a) 成分のポリアミド樹脂及び (b) 成分のポリフェニレンスルフィド樹脂の合計 100 重量部に対して (c) 無機充填材 0.5 ~ 200 重量部を含有することを特徴とする請求の範囲第 2 ~ 5 項のいずれかに記載の熱可塑性樹脂構造体。

7. (補正後) 射出成形、射出圧縮成形、圧縮成形の内から選ばれる少なくとも一種の方法で成形された請求の範囲第 2 ~ 6 項のいずれかに記載の熱可塑性樹脂構造体の成形品。

8. (補正後) 請求の範囲第 2 ~ 7 項いずれかに記載の熱可塑性樹脂構造体を加工して得られる薬液またはガス搬送用あるいは貯蔵用容器。

9. (補正後) 請求の範囲第 2 ~ 7 項いずれかに記載の熱可塑性樹脂構造体を加工して得られる薬液またはガス搬送用あるいは貯蔵用容器の付属部品。

10. (補正後) 請求の範囲第 2 ~ 6 項いずれかに記載の熱可塑性樹脂構造体がバリア層を構成してなることを特徴とする積層構造体。

11. バリア層の片面側または両面側に隣接層が構成され、該隣接層を構成する樹脂層がバリア層を構成する熱可塑性樹脂構造体とは異なる熱可塑性樹脂層からなることを特徴とする請求項 10 に記載の積層構造体。

12. 隣接層を構成する熱可塑性樹脂が、ポリオレフィン樹脂、熱可塑性ポリエステル樹脂、ポリアミド樹脂、ポリカーボネート樹脂、ABS樹脂から選ばれる少なくとも 1 種の樹脂であることを特徴とする請求の範囲第 11 項に記載の積層構造体。

13. 隣接層を構成する熱可塑性樹脂が、高密度ポリエチレンであることを特徴とする請求の範囲第 11 項記載の積層構造体。

## LETTER OF AMENDMENT

(Amendment based on the official order according to the  
stipulation of Article 11 of the Law)

To Hon. the Director of the Patent Office:

1. Designation of International Patent Application:

PCT/JP00/06750

2. Applicant:

Name: TORAY INDUSTRIES, INC.  
Address: 2-1, Nihonbashi-Muromachi 2-chome, Chuo-ku,  
Tokyo, 103-8666, Japan  
Nationality: Japan  
Address: Japan

3. Agent:

Name: IWAMI Tomonori, patent attorney  
Address: c/o Intellectual Property Department,  
TORAY INDUSTRIES, INC., 8-1, Mihama 1-chome,  
Urayasu-shi, Chiba,  
279-8555, Japan

4. Date of Order to Amendment: 03.07.01

5. Objects to be Amended: Claims

6. Contents of Amendment:

As in the attached sheets, Claim 1 is deleted, Claim 2  
is changed to an independent claim, and "claim 1" is deleted  
from the other subsidiary claims.



7. Contents of Attached Document:

One set of new pages 33 and 34 of the specification.

## CLAIMS

1. (Deleted.)
2. (Amended) A thermoplastic resin structure formed of a resin composition that comprises substantially (a) from 55 to 80 % by volume of a polyamide resin and (b) from 20 to 45 % by volume of a polyphenylene sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, the polyphenylene sulfide resin (b) forms a matrix phase (continuous phase) and the polyamide resin (a) forms a disperse phase.
3. (Amended) The thermoplastic resin structure as claimed in claim 2, for which the blend ratio of the polyamide resin (a) and the polyphenylene sulfide resin (b) is such that the former accounts for from 60 to 75 % by volume and the latter for from 25 to 40 % by volume.
4. A thermoplastic resin structure formed of a resin composition that comprises (a) from 15 to 85 % by volume of a polyamide resin and (b) from 15 to 85 % by volume of a polyphenylene sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, both the phase of the polyphenylene sulfide resin (b) and the phase of the polyamide resin (a) are substantially continuous phases.
5. A thermoplastic resin structure formed of a resin composition that comprises (a) from 55 to 95 % by volume of a polyamide resin and (b) from 5 to 45 % by volume of a polyphenylene

sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, the polyamide resin (a) forms a continuous phase and the polyphenylene sulfide resin (b) forms a laminar disperse phase.

6. (Amended) The thermoplastic resin structure as claimed in any of claims 2 to 5, which contains (c) from 0.5 to 200 parts by weight of an inorganic filler relative to 100 parts by weight of the total of the polyamide resin (a) and the polyphenylene sulfide resin (b).

7. (Amended) Moldings of the thermoplastic resin structure of any of claims 2 to 6, which are formed in at least one method of injection molding, injection compression molding or compression molding.

8. (Amended) Containers for transportation or storage of liquid chemicals or gases, which are obtained by working the thermoplastic resin structure of any of claims 2 to 7.

9. (Amended) Attached parts for containers for transportation or storage of liquid chemicals or gases, which are obtained by working the thermoplastic resin structure of any of claims 2 to 7.

10. (Amended) A multi-layer structure with a barrier layer, in which the barrier layer is formed of the thermoplastic resin structure of any of claims 2 to 6.

11. The multi-layer structure as claimed in claim 10, wherein a neighboring layer is formed on one or both surfaces of the

barrier layer, and the neighboring layer is a thermoplastic resin layer differing from the thermoplastic resin structure that forms the barrier layer.

12. The multi-layer structure as claimed in claim 11, wherein the thermoplastic resin to form the neighboring layer is at least one selected from polyolefin resins, thermoplastic polyester resins, polyamide resins, polycarbonate resins and ABS resins.

13. The multi-layer structure as claimed in claim 11, wherein the thermoplastic resin to form the neighboring layer is high-density polyethylene.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/06750

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl.<sup>7</sup> C08L81/02, C08L77/00, B32B27/34, B32B27/00, C08J5/00 (subclassing) ( )

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) C08L81/00-81/02, C08L77/00-77/12, B32B27/34, B32B27/00, C08J5/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
① X	JP, 10-138372, A (Toray Industries, Inc.), 26 May, 1998 (26.05.98), Claims; Par. Nos. [0072], [0079]; example & EP, 900650, A1 & WO, 9821030, A1	1-6, 8-16
② X	JP, 5-124090, A (Toray Industries, Inc.), 21 May, 1993 (21.05.93), Claims; Par. Nos. [0046], [0047], [0055]; example (Family: none)	1, 4, 6, 8, 9
③ X	JP, 5-185425, A (Daiichi Seiko K.K.), 27 July, 1993 (27.07.93), Claims; Column 2, lines 12 to 18; Column 4, lines 11 to 13; example (Family: none)	1-7
④ X	JP, 2-222452, A (Dainippon Ink and Chemicals, Inc.), 05 September, 1990 (05.09.90), Claims; page 4, upper left column to lower left column; example (Family: none)	1-7
⑤ X	US, 5436300, A (Kureha Kagaku Kogyo Kabushiki Kaisha), 25 July, 1995 (25.07.95),	1-3, 5-7

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
12 December, 2000 (12.12.00)

Date of mailing of the international search report  
26 December, 2000 (26.12.00)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT		International application No.	
PCT/JP00/06750		PCT/JP00/06750	
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT.			
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
	Column 2, lines 25-46; Column 6, line 37 to Column 9, line 6; Column 9, line 19 to Column 10, line 42	B. FIELDS SEARCHED	
	& JP, 5-51532, (A) (Ube Industries, Ltd. Toyota Central Research and Development Laboratories, Inc.), 20 September, 1991 (20.09.91),	Minimum documentation searched (classification system followed by classification symbols)	
	Claims: par. Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 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